

Final Office Action. Because the present Response does not affect the previously-pending claims, Applicant respectfully believes that the present response does not require additional searching, and no new matter is added by this Amendment.

REJECTIONS UNDER 36 U.S.C. § 103

The Final Office Action rejects all pending claims under 35 USC § 103, citing the combination of U.S. Patent No. 5,749,044 ("Natarajan") and US Patent No. 5,341,397 ("Gudmundson"). Applicants respectfully traverse these rejections in that even the cited combination of references fails to disclose each and every limitation of the present claims.

The present application generally relates to power-based channel assignment in a wireless communications system. Each signal is assigned to an appropriate channel within a pre-determined frequency band (e.g. within a cell) according to the power of the signal. By grouping signals of similar power into common sub-bands, the capacity and efficiency of the entire cell is improved. At least the concepts of sub-bands and sub-band channel assignment based upon signal frequency are entirely undisclosed in the prior art of record, as described more fully below.

As stated in Applicant's Response filed on July 24, 2002, the Natarajan Reference (which is assigned to the same entity as the present application) generally discloses a technique for determining a best cell (from several available cells) for servicing a channel request from a subscriber unit. The Natarajan reference determines the best cell for a connection based upon several criteria for each of the candidate cells, including the candidate cell's broadcast power as received at the subscriber unit (see col. 5, line 58 through col. 6, line 17). The Natarajan reference is silent, however, on the issue of assigning a sub-band channel within a cell. The Final Office Action acknowledges that Natarajan "fails to specify that different cells may have different power ranges". Even further, Natarajan fails to specify at least the step of "specifying a power range for each of

said plurality of frequency sub-bands, said power range representing a range of signal powers that are to be supported by one of a plurality of channels within each of said plurality of frequency sub-bands" as recited by various independent claims of the present application (emphasis added). To the contrary, Natarajan makes no mention whatsoever of frequency sub-bands, power ranges associated with each frequency sub-band, or ranges of signal powers. Such functionality would be beyond the scope of the Natarajan reference, which is solely concerned with determining the most appropriate cell for a particular subscriber unit.

The Gunderson reference similarly fails to provide the missing elements relating to frequency sub-bands with associated power ranges. Gunderson generally relates to a technique of assigning a separate frequency to each unique type of cell (e.g. umbrella cells, microcells, etc.) to reduce the total amount of interference present in the system (see, e.g., Gunderson col. 4, lines 56-69). The Gunderson reference makes no mention, however, of specifying power ranges for each of a plurality of frequency sub-bands, nor do the power ranges represent a range of signal powers supported by each channel, as various recited in the present claims. Although the Gunderson system does make brief reference to the transmit power of the various cell types (e.g. col. 2, lines 62-65), this discussion is limited to comparisons of relative transmit powers of the various types of cells (e.g. stating that umbrella cells typically transmit with a higher power than microcells). This is clearly distinguishable from "assigning a channel within a sub-band that has a power range encompassing the power level of the signal" as recited in the present claims.

In contrast to the teachings of the cited references, the present claims recite that power ranges are specified for each of the sub-bands. A power level associated with the connection is used to assign the connection to a channel in a sub-band having a power range that encompasses the power level of the signal. Thus, each sub-band carries communications having similar power levels and communications capacity within each sub-

band. Therefore, the rejections are unsupported by the references of record, and the Applicants respectfully request withdrawal of the rejection under 35 U.S.C. 103.

II. CONCLUSION

It is therefore respectfully submitted that the above-identified application is in condition for allowance and such allowance is earnestly requested. Should the Examiner have any questions or wish to further discuss this application, the Examiner is invited to contact the undersigned at (480) 385-5060.

Applicant believes that no fee is required by this Response. If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment of this application, however, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 13-4771 for any fee which may be due.

Respectfully submitted,



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Dated November 30, 2002  
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RESPONSE AFTER FINAL EXPEDITED PROCEDURE GROUP ART UNIT 2682	09/398,307

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NOTES/COMMENTS:

**REPLY UNDER 37 C.F.R. 1.116 – EXPEDITED  
PROCEDURE – EXAMINING GROUP 2682****FORMAL COMMUNICATION  
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